

Supplemental Table 4. Metabolite fold change between CS and H, CS21 and H, and CS21+RS and H. Metabolites that showed statistically significant changes ($p < 0.05$) are indicated in blue (increase, ratios higher than 1) or red (decrease, ratios lower than 1). ↑ or ↓ means increase or decrease, respectively, from (or to) non detectable levels. Nc: no change

	Elegant Lady (EL) (Resistant)			Red Globe (RG) (Resistant)			Limón Marelli (LM) (Resistant)		
	CS/H	CS21/H	CS21+RS/H	CS/H	CS21/H	CS21+RS/H	CS/H	CS21/H	CS21+RS/H
Sugars									
Fucose	1.03	1.11	2.46	1.12	1.26	2.36	0.99	1.09	2.30
Fructose	1.18	2.22	2.78	0.93	0.93	0.98	0.98	0.96	0.94
Fructose-6-P	1.06	0.99	1.54	1.08	1.72	1.88	0.99	1.29	1.81
Glucose	1.15	2.53	3.55	0.85	0.78	0.85	1.01	1.25	0.97
Glucoheptose	0.97	0.91	1.04	1.01	1.09	0.91	1.11	1.28	1.25
Isomaltose	0.97	0.97	0.93	1.00	1.58	2.61	1.08	1.63	1.52
1-O-Methyl-mannoside	0.87	0.85	0.74	0.95	1.03	1.00	1.05	1.07	0.97
Maltose	1.09	0.95	1.19	1.09	1.14	1.20	1.08	1.29	1.16
Raffinose	1.04	17.80	1.25	1.92	20.83	2.25	1.87	23.80	2.69
Rhamnose	0.99	0.89	0.97	0.81	1.06	1.33	0.91	0.97	1.31
Sucrose	1.20	3.00	3.68	0.96	1.00	0.93	0.96	1.02	0.95
Trehalose	0.57	0.45	0.56	1.41	1.39	1.53	1.13	1.48	1.32
Xylose	1.02	1.05	2.15	0.99	1.09	2.10	1.15	1.35	1.76
Sugars alcohol									
Galactinol	36.38	30.34	0.73	50.57	86.95	1.57	47.23	138.59	1.81
Glycerol	0.93	1.00	0.81	0.95	0.87	0.91	0.99	1.01	0.88
Myo-inositol	1.39	1.93	1.56	1.16	1.10	1.13	0.82	0.94	0.94
Maltitol	0.94	0.81	1.01	0.92	0.90	1.07	1.13	1.36	1.17
Sorbitol	1.27	2.49	2.87	0.92	0.93	0.89	0.97	0.95	0.89
Organic acids									
Benzoate	1.53	1.27	1.06	0.83	0.90	0.89	1.03	0.94	0.99
Citrate	1.12	2.33	2.88	0.88	0.86	0.86	1.01	0.89	0.83
Dehydroascorbate	0.74	0.41	0.60	0.50	0.88	0.99	0.59	0.87	0.53
2-oxo-Glutarate	0.30	↓	↓	0.39	0.14	0.12	0.65	0.40	0.29
Fumarate	1.63	0.97	0.68	0.86	0.77	0.47	1.09	1.13	0.77
Glycerate	1.14	0.94	1.64	1.06	1.06	1.62	1.73	1.43	1.82
Gulonate-1,4-lactone	0.85	0.74	0.70	0.66	0.66	0.69	1.06	1.23	0.97
Quinate	1.09	1.88	2.36	0.91	0.94	0.98	0.97	0.98	0.90
Malate	1.02	1.70	1.83	0.93	0.86	0.87	1.01	1.02	0.91
Succinate	0.53	↓	0.83	0.47	0.34	0.53	0.52	0.51	0.55
Amino acids									
Alanine	0.91	2.04	2.29	0.92	2.58	2.02	1.22	2.46	7.11
β-Alanine	0.32	0.44	0.30	1.07	0.91	1.08	nc	nc	↑
Asparagine	0.66	0.88	0.81	0.92	0.81	0.84	1.42	1.60	0.65
Aspartate	1.67	2.60	1.27	1.27	1.63	0.61	1.62	2.21	1.03
GABA	1.09	1.94	0.76	0.96	1.74	1.13	1.69	2.99	2.54
Glutamate	1.20	1.05	0.77	1.15	1.20	0.86	1.31	1.42	1.39
Glycine	1.18	1.27	0.86	0.81	0.98	0.56	1.12	1.32	1.00
Isoleucine	2.00	4.53	2.11	0.96	1.67	1.26	1.63	3.57	0.42
Phenylalanine	1.70	3.75	3.07	1.27	2.40	4.30	1.90	4.44	1.04
Proline	0.75	0.76	0.72	0.64	0.49	0.37	1.64	1.99	1.76
4-OH-Proline	0.60	0.65	0.38	1.30	1.36	1.13	0.64	1.08	1.31
Serine	1.45	1.87	2.98	0.99	1.49	2.03	1.31	1.77	2.86
Threonine	1.29	1.04	1.34	0.96	0.98	1.37	1.35	1.57	1.40
Valine	1.56	3.35	1.38	0.90	1.65	0.96	1.36	2.73	0.94
Fatty acids									
Hexadecenoic acid	0.90	0.88	0.97	0.84	0.83	0.91	0.94	0.86	0.88
Octadecanoic acid	0.87	0.91	1.06	0.76	0.74	0.85	0.90	0.79	0.83
Miscellaneous									
Ornithine	0.84	1.49	1.26	1.19	1.39	1.88	2.85	2.66	2.19
Phosphate	1.19	1.19	1.00	1.04	0.94	0.98	1.13	1.34	1.31
Putrescine	0.70	0.71	0.90	1.00	1.06	1.21	2.31	2.05	1.59
cis-3-caffeoylequinic acid	0.76	0.69	1.05	0.60	0.97	1.86	0.22	0.96	0.18
trans-3-caffeoylequinic acid	0.44	0.64	1.61	0.57	0.61	0.99	0.18	0.87	0.48
Spermidine	0.79	0.91	1.66	0.80	0.86	1.38	nc	↑	↑
Urea	0.64	0.68	1.14	0.62	0.69	0.37	0.99	3.42	0.62

Enzymatic Assay Results (U/g DW)									
	Springlady (SL) (Resistant)			Rojo 2 (R2) (Intermediate)			Flordaking (FD) (Susceptible)		
	CS/H	CS21/H	CS21+RS/H	CS/H	CS21/H	CS21+RS/H	CS/H	CS21/H	CS21+RS/H
Sugars									
Fucose	1.35	1.19	3.17	1.22	1.21	2.28	1.08	1.36	3.23
Fructose	1.02	0.99	0.97	1.00	1.00	0.91	1.00	1.06	0.99
Fructose-6-P	1.16	0.94	1.25	0.85	0.85	0.84	0.76	1.08	1.13
Glucose	0.84	0.85	0.93	0.98	0.84	0.79	1.09	0.87	1.11
Glucoheptose	1.47	0.81	1.91	1.06	1.17	1.14	1.22	0.76	1.60
Isomaltose	1.36	0.96	1.38	1.46	1.18	1.42	1.92	1.56	2.03
1-O-Methyl-mannoside	1.04	1.03	1.10	1.10	1.04	0.93	1.15	0.90	1.00
Maltose	1.15	0.98	1.10	1.21	1.11	1.00	1.24	1.02	1.10
Raffinose	1.70	11.32	1.89	1.34	5.73	1.79	1.51	3.15	1.69
Rhamnose	1.05	0.92	1.32	1.26	1.08	1.66	1.39	1.12	1.36
Sucrose	1.02	1.03	0.98	0.99	0.86	0.76	1.19	0.83	0.95
Trehalose	1.28	1.17	1.43	1.24	1.10	1.17	1.40	0.96	1.24
Xylose	1.21	1.33	2.50	1.19	1.58	2.85	1.01	1.81	2.93
Sugars alcohol									
Galactinol	↑	↑	↑	↑	↑	nc	↑	↑	nc
Glycerol	0.87	0.92	0.93	1.01	0.97	0.94	0.94	1.01	0.95
Myo-inositol	0.98	0.81	0.83	1.16	0.83	0.71	1.16	0.96	0.98
Maltitol	1.04	0.91	1.09	1.25	1.15	0.98	1.32	1.13	1.19
Sorbitol	0.89	0.91	0.71	1.03	0.99	0.45	1.25	0.83	0.59
Organic acids									
Benzoate	0.90	0.84	0.98	0.98	1.01	0.86	1.06	0.88	1.20
Citrate	0.97	0.89	0.79	0.96	0.96	0.76	1.02	1.05	0.92
Dehydroascorbate	1.07	0.54	0.81	0.97	1.11	0.99	1.40	0.76	1.06
2-oxo-Glutarate	0.41	0.14	0.35	0.79	↓	0.62	0.69	0.72	0.33
Fumarate	0.91	0.74	0.42	1.12	0.87	0.62	0.85	0.72	0.34
Glycerate	1.03	1.33	1.48	1.08	0.93	1.16	1.31	1.48	1.55
Gulonate-1,4-lactone	0.61	0.67	0.54	0.85	0.79	0.71	0.91	1.21	1.18
Quinate	1.05	0.99	1.01	1.06	1.03	0.88	1.02	1.08	0.94
Malate	0.93	0.90	0.82	1.06	1.00	0.91	1.01	0.84	0.74
Succinate	0.38	0.21	0.47	0.51	0.14	0.40	0.23	0.30	0.32
Amino acids									
Alanine	1.20	1.21	0.51	0.75	1.28	2.16	0.19	3.16	1.33
β-Alanine	0.83	0.71	0.55	0.81	1.00	0.78	0.86	1.92	0.90
Asparagine	0.75	0.73	0.73	0.95	0.97	0.90	0.55	1.09	0.53
Aspartate	1.33	1.84	0.81	1.35	2.24	0.94	1.19	1.61	0.70
GABA	0.91	1.47	0.39	0.88	1.78	0.96	0.39	3.38	0.75
Glutamate	0.68	0.54	0.47	1.31	0.46	0.72	0.19	1.23	0.51
Glycine	0.51	0.57	0.30	0.72	0.93	0.90	0.36	1.16	0.23
Isoleucine	1.43	1.60	2.09	0.89	1.33	1.63	0.58	1.96	1.92
Phenylalanine	1.55	2.36	2.41	0.89	1.95	2.00	0.68	1.94	2.11
Proline	0.84	0.71	0.46	0.63	0.77	0.57	1.63	3.19	0.83
4-OH-Proline	0.74	0.91	0.64	1.06	0.96	0.70	0.96	1.19	0.73
Serine	1.41	1.27	2.41	0.81	1.06	1.54	0.73	1.85	2.52
Threonine	1.37	0.99	1.88	0.77	1.04	1.19	0.87	1.18	1.50
Valine	1.38	1.52	1.28	0.87	1.20	1.39	0.47	2.14	1.55
Fatty acids									
Hexadecenoic acid	0.91	1.08	0.91	0.98	1.07	0.92	0.80	1.12	0.90
Octadecanoic acid	1.11	1.17	0.97	0.95	1.13	0.93	0.90	1.08	0.89
Miscellaneous									
Ornithine	9.38	7.62	10.44	1.29	1.84	1.87	4.07	0.71	1.78
Phosphate	1.36	1.04	1.27	1.17	1.12	1.09	1.38	1.15	1.18
Putrescine	2.81	0.98	2.51	1.09	1.30	1.24	1.11	0.96	0.99
cis-3-caffeoylequinic acid	0.98	1.09	1.00	1.11	0.94	0.81	0.28	0.50	2.22
trans-3-caffeoylequinic acid	1.21	1.05	1.24	1.12	1.00	0.81	0.17	0.25	1.14
Spermidine	0.48	1.02	0.67	0.95	1.02	1.53	↓	1.71	2.94
Urea	1.05	0.69	0.89	1.71	0.66	0.71	0.84	1.34	0.78